Executive Summary

The Hydrilla Program's goals are to eradicate every hydrilla plant from California and to find any new invasion when it is small and easy to eradicate. The Hydrilla Program responded vigorously to new challenges in a couple of existing infestations, even as progress continued in most.

Hydrilla is an invasive, non-native water plant and has been called the world's worst submersed weed. It reduces water storage and water movement, chokes water control structures and hydroelectric generators, ruins boating and fishing, damages fish and wildlife habitat, and produces good mosquito habitat. Hydrilla once heavily infested canals in the Imperial Irrigation District in Southern California, where it reduced water flows as much as 85 percent. In highly infested states, such as Florida, control efforts cost tens of millions of dollars each year.

Some of what makes hydrilla such a successful weed are its excellent survival and dispersal capabilities. It breaks apart easily, and fragments no more than one inch long will grow new plants. It also develops "tubers" on its roots. Each tuber produces a new plant, and a single tuber can lead to several hundred new tubers in one season. Tubers survive for four to seven years and present the major challenge in eradicating the plant.

Key developments of 2008:

- Hydrilla returned to Clear Lake in 2007 after being absent since June 23, 2003. Treatments in Clear Lake depend solely on herbicides, and the treatments had ended with the 2006 season. The Program's biologists suspected the plants might re-appear and increased the number of boat crews from two in 2006 to three in 2007. Due to the vigorous return of the plants in 2007, the number of crews increased to four in 2008. The crews found about 196 "spots" of hydrilla in 2008 after finding 72 spots in 2007. Most were single plants, but clumps ranged up to several yards across. The area needing treatment increased from 245 acres at the end of 2007 to 573 by the end of the 2008 season. The crews responded admirably, searching the entire shoreline of 100+ miles nearly nine times in the five-month season, and treating nearly all plants within a day or two of finding them.

- 2008 was the sixth year in a row where the Program's surveyors could not find any hydrilla in the Chowchilla River / Eastman Lake infestation. They inspected the entire 26-mile length of the project once, and checked historic hot spots twice. This was the third year with no treatments.

- The Program's surveyors found no plants for the fourth year in a row in the fishing resort in Tulare County, and in the two small infestations in Calaveras County. For the second year, no plants were found in any of the three small, recently infested ponds in Nevada County. After more than 100 plants popped up in 2006 in one of the Anderson Park ponds in Shasta County, all those infestations were free of hydrilla in both 2007 and 2008.

- The Program had a contractor line 3500 feet of the Oregon House canal with concrete. The lining covered the most heavily infested sections of the canal. The canal is the headwaters of the infestation and could undo any eradication efforts in the downstream ponds. The lining effort inspired the Yuba Agricultural Commissioner to undertake lining another 1500 feet in 2009. The Hydrilla Program will participate in that project.

- No new infestations of hydrilla were found in California this year, despite visiting over 250 lakes, ponds, and access points along streams, and surveying over 130 miles in the Sacramento/San Joaquin River Delta.

Remaining challenges:

- Keeping the pressure on Clear Lake. 2006 was the first year where the herbicide pressure on the plant was lifted. The major herbicide we use, fluridone, is effective for a relatively long time. As the herbicide wears off, surviving tubers have the opportunity to grow. The Program responded quickly to the new finds in 2007 and 2008, implementing the standard protocol.

- Keeping the pressure on the other infestations. Most infestations are responding well to treatments. The Oregon House infestation has been one of the most stubborn infestations, but, with the canal lining, we hope to begin focusing on the final eradication of the plants in the downstream ponds.

- Budget challenges. The major herbicide for hydrilla is very expensive. The treatments in Clear Lake are straining the Program's resources. We hope to attack the tubers directly with methods such as dredging, but dredging may have serious permitting issues that would further challenge the Program's resources. However, if such a method were available, it might reduce the need for herbicide treatments.

Hydrilla was first found in California in 1976, and it has been introduced on 30 separate occasions. The Hydrilla Program has eradicated 22 of those infestations and several other infestations are approaching eradication. The prime requirement for eradication is persistence. A single eradication of a large infestation requires six to 20 years of continuous attention, due to plant's excellent growth, dispersal, and survival strategies. In addition, infestations are easier to eradicate when they are small. Finding small infestations requires routine, vigilant, widespread survey.